



## **Knowledge of Cervical Cancer and Its Screening among Female Nurses Working in Chukwuemeka Odumegwu Ojukwu University Teaching Hospital, South-Eastern Nigeria**

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### **Authors' contributions**

*This work was carried out in collaboration between all authors. Author IUE conceived the study. Authors IUE and CCE designed the study. Authors JCU and LCI were involved with data collection and management. Authors IUE and GIU drafted the initial manuscript. Authors IUE, LCI and CEO did the data analysis and wrote the final manuscript. All the authors read and approved the final manuscript.*

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### **ABSTRACT**

**Background:** Cancer of the cervix, although a preventable disease, continues to be one of the commonest cancers among women in developing countries. Unlike the developed nations, developing countries still experience late presentations of cervical cancer, probably due to poor knowledge and poor uptake of the preventive measures. Adequate knowledge of this condition among nurses will be beneficial to women as nurses constitute a significant proportion of care givers to women.

**Methodology:** A cross sectional survey of consenting female nurses working in a teaching hospital

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using pretested self administered questionnaires was done. Data analysis was with SPSS (IBM SPSS statistics 20). Chi square test was used to test for association between variables and level of significance was set at  $P \leq 0.05$ .

**Results:** The mean age of the respondents was 37.1 years  $\pm$  9.8. One hundred and fifty three (92.7%) had heard of cervical cancer. Only 20% identified HPV as the cause of cervical cancer. Younger age, junior rank and having nursed a cervical cancer patient significantly influenced the knowledge of the correct cause of cervical cancer. More than 90% knew about Pap test but only 16% have actually had a Pap test.

**Conclusion:** There was a fairly good level of awareness of cervical cancer among this group of nurses but the knowledge of the aetiology was very poor. Awareness of the screening procedure was also high but this did not translate into practice as only few of the women have actually had a Pap smear test.

*Keywords: Cervical cancer; aetiology; screening; nurses.*

## 1. INTRODUCTION

Cancer of the cervix constitutes the second commonest cancer in women, coming after only breast cancer [1]. Although its incidence appears to be decreasing in developed societies mainly due to availability of screening, vaccines and preventive techniques, it continues to be a leading contributor to cancer related deaths in the underdeveloped nations. Cancer of the cervix is clearly a preventable condition owing to a clear understanding of its causative organism and risk factors.

Despite these factors, Nigeria and many other underdeveloped nations continue to experience late presentations of advanced stages of cervical cancer [2]. The cause of this trend is definitely multifactorial. The inability of government to provide essential tools for screening and prevention of cervical cancer makes disease control very difficult. To a greater extent, knowledge of this disease and available options for prevention are key to success in reducing the burden of cancer of the cervix.

Nurses, as health workers, have the ability to play a significant role in enlightening patients on the issues concerning cancer of the cervix. Nurses run antenatal clinics, family planning clinics and the immunization units and these are regularly visited by women. It is therefore essential that nurses have proper knowledge of cervical cancer to be able to counsel patients effectively.

In Addis Ababa, Kress and co workers observed that despite a high knowledge of cervical cancer, there was poor knowledge of its aetiology among nurses and midwives [3]. Other studies in similar underdeveloped societies also highlighted the

deficiencies in the knowledge of cervical cancer and its aetiology among health workers [4,5]. In Ibadan, Nigeria, nurses also appeared to have inadequate knowledge about cervical cancer [6].

Late presentation, regularly seen in developing nations, reflects a poor understanding of risk. Since nurses are usually the first contact patients make in the hospital and are usually the ones who give health talks to patients, the authors believe that adequate knowledge of cervical cancer among nurses will improve understanding of this disease among patients. This study aims at assessing the knowledge of cervical cancer, its aetiology and screening methods among a group of female nurses. Their own practice of the preventive measures as well as inherent risks for cancer of the cervix has also been assessed. The findings from this study can form a basis for recommendations that will increase learning opportunities that improve the knowledge of nurses and empower patient understanding of cervical cancer and its prevention.

## 2. MATERIALS AND METHODS

This was a cross sectional descriptive study conducted among one hundred and sixty five female nurses working in the different departments of Chukwuemeka Odumegwu Ojukwu University Teaching Hospital Awka, Anambra state, south eastern Nigeria. The hospital is a state-owned teaching hospital and receives patients from Anambra state and adjoining areas of Enugu, Delta and Imo states. The study instrument was a self administered semi-structured questionnaire which was initially pretested among nurses working in a general hospital. Following the pretest, the instrument was modified accordingly. These questionnaires were not included in the final analysis.

All the female nurses in the hospital were approached for the study and the questionnaire was administered to only those who consented after receiving information on the nature and purpose of the study. Participating nurses were not allowed to exchange ideas while completing the questionnaires which were collected immediately after they were completed. The questionnaire collected information on the sociodemographic characteristics of the participants, awareness of cervical cancer and its aetiology. It also evaluated nurses' awareness, as well as their inherent risk of cervical cancer.

Data were coded and analysed using the Statistical Package for Social Sciences (IBM SPSS statistics 20). Results were presented as frequencies and percentages. Test of association between variables was done using the chi square test and the level of significance was set at  $p \leq 0.05$ .

### 3. RESULTS

One hundred and seventy three female nurses were approached for the study but only one hundred and sixty five gave their consent to fill the questionnaire. The mean age of the respondents was  $37.1 \pm 9.8$  years while the mean parity was  $2.2 \pm 2.1$ . The socio-demographic characteristics of the respondents are shown in Table 1. One hundred and fifty three respondents (92.7%) had heard of cervical cancer.

Only 33 of the respondents (20%) identified human papilloma virus as the cause of cervical cancer. The causes of cervical cancer as reported by the respondents are shown in Fig. 1. Nurses who had nursed a patient with cervical cancer previously were more likely to know the cause of cervical cancer ( $P = 0.02$ ). Respondents who were of younger age ( $P = 0.001$ ) and junior nursing rank ( $p = 0.001$ ) were significantly more likely to know the cause of cervical cancer. More nurses with basic qualification understood the cause of cervical cancer than the graduate nurses, although this did not reach significant levels ( $P = 0.099$ ). One hundred and twenty three respondents (74.5%) were aware that cervical cancer is a preventable disease.

The majority of the respondents (90.9%,  $N = 150$ ) have heard of the Pap test but only 27 (16%) have performed a Pap test. The commonest reported source of information on

Pap smear was "school" followed by "hospital" and "workshops". These sources of information are shown in Fig. 2.

Among the surveyed nurses, 60 (36.4%) had multiple sexual partners, 63 (38.2%) reported use of condom during casual sexual intercourse. Nine respondents (5.5%) commenced sexual activity before the age of 18 while 30 (18.2%) have had a sexually transmitted infection previously. Twenty four respondents (14.5%) used oral contraceptive pills for family planning.

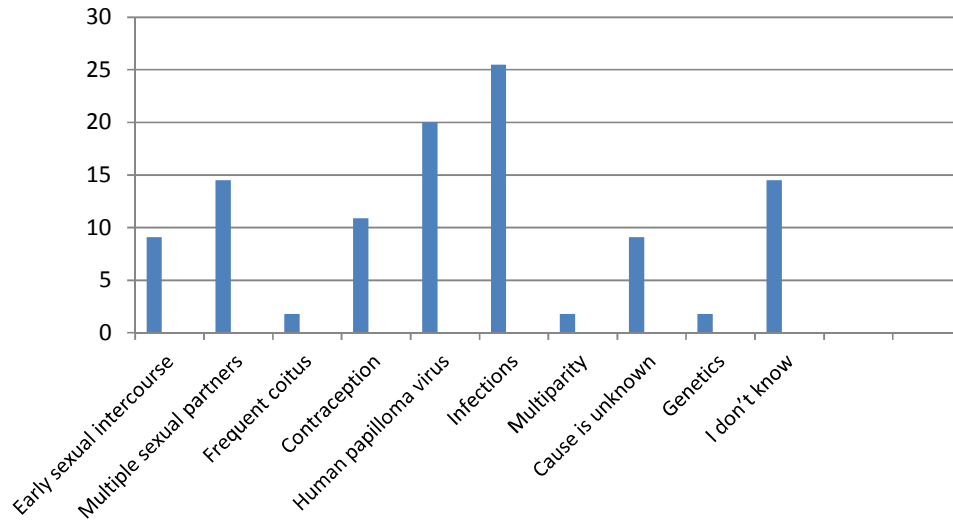
**Table 1. Socio-demographic characteristic of the respondents**

Variables (N)	Frequency	Percentage
<b>Age (156)</b>		
≤ 30	60	38.5
>30	96	61.5
<b>Parity (159)</b>		
0	45	28.3
1 – 4	93	58.5
5 and above	21	13.2
<b>Marital status (162)</b>		
Married	132	81.5
Not married	30	18.5
<b>Level of education (165)</b>		
Graduate nurse	30	18.2
Basic nursing	135	81.8
<b>Ever heard of cervical cancer (165)</b>		
Yes	153	92.7
No	12	7.3

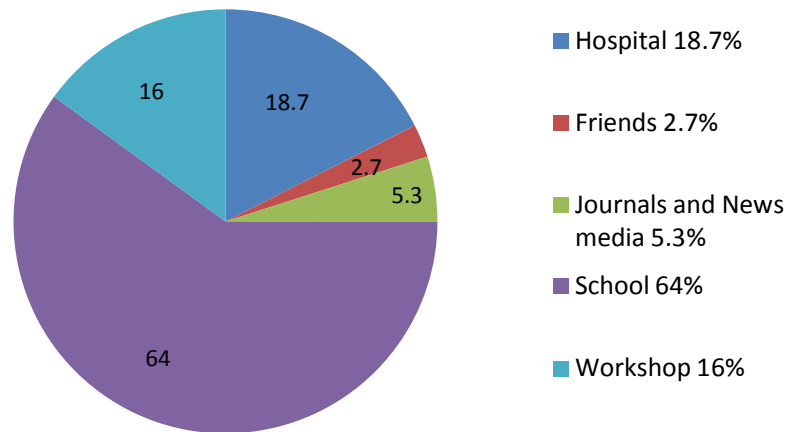
### 4. DISCUSSION

The majority of the nurses (92.7%) reported that they have heard of cervical cancer. This number appears high, but considering that about 7% of nurses that work in a tertiary center have never heard of cervical cancer indicates a need for remedial information. The findings here reported are similar to what has been documented in a similar study in India [7].

There is very poor knowledge of the cause of cervical cancer and majority of the respondents could not differentiate between risk factors for and causative factor of cervical cancer. Only 20% of the respondents identified HPV infection as the cause of cervical cancer. This poor knowledge of the aetiology of cervical cancer has also been documented by other authors [3,4,5].



**Fig. 1. Causes of cervical cancer as reported by respondents**



**Fig. 2. Sources of information on Pap smear\*\* Total percentage exceeds 100 because some respondents reported more than one source**

Another study in Malaysia also reported poor knowledge of HPV among nurses [8]. However, Patel et al identified a good knowledge among nurses working in England [9]. Younger and more junior nurses were more likely to have good knowledge of the cause of cervical cancer. This may be explained by the fact that they are recently graduated there may have been recent improvement in the teaching curriculum for nurses. It is therefore clear that continuous education for health workers is very important to enable them to provide adequate and correct information to clients. In Ibadan, south west

Nigeria, Ndikom and his group demonstrated a positive effect of educational intervention on nurses' knowledge and attitude towards providing information on cervical cancer screening [10]. An unexpected finding in this study was that there was better knowledge of the cause of cervical cancer among nurses with basic qualification compared with the graduate nurses although this was not statistically significant. Caution, however, has to be applied while interpreting this finding because of the very low number of graduate nurses in this population of nurses.

There was good knowledge of Pap smear among the respondents but this did not correlate with practice as only 18% (27/150) of those who knew of Pap smear had actually performed one, suggesting that awareness alone may not lead to utilization and may be influenced by multiple factors. Dim and his group made observations to support this argument among patients attending a hospital in south east Nigeria [11].

The main limitation of this study is that it depended on self reporting and respondents may not want to give the correct information. However, to limit this, the questionnaires were completed independently so that the participants were confident that nobody knew what they had filled.

## 5. CONCLUSION

There was a fairly good level of awareness of cervical cancer among this group of nurses, but the knowledge of the aetiology was very poor. Awareness of the screening procedure was also high, but this did not translate into practice as only a few of the nurses have actually had a Pap smear test. Continuing education for nurses is recommended to improve knowledge of cervical cancer and other reproductive health issues. We advocate an update on the nursing education curriculum in Nigeria to emphasize cancer of the cervix and other important public health issues.

## CONSENT

Informed consent was obtained from all the participants before the questionnaires were administered.

## ETHICAL APPROVAL

Ethical approval for this study was given by the ethics committee of the Chukwuemeka Odumegwu Ojukwu University Teaching Hospital.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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